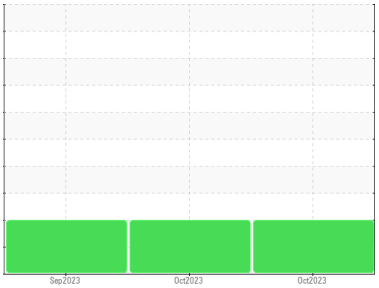
PROBLEM SUMMARY

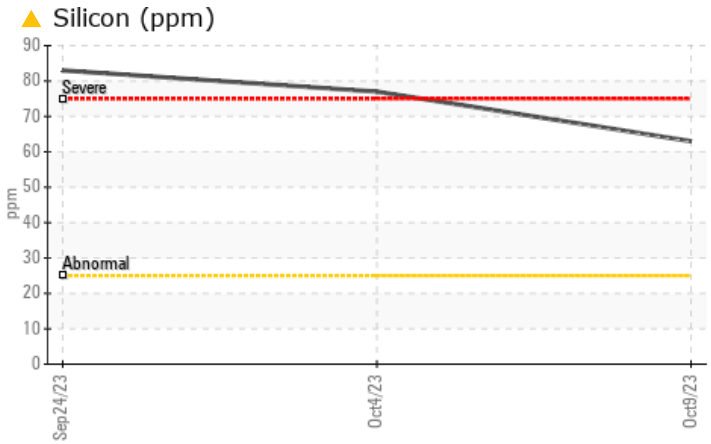
Machine Id
414047
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

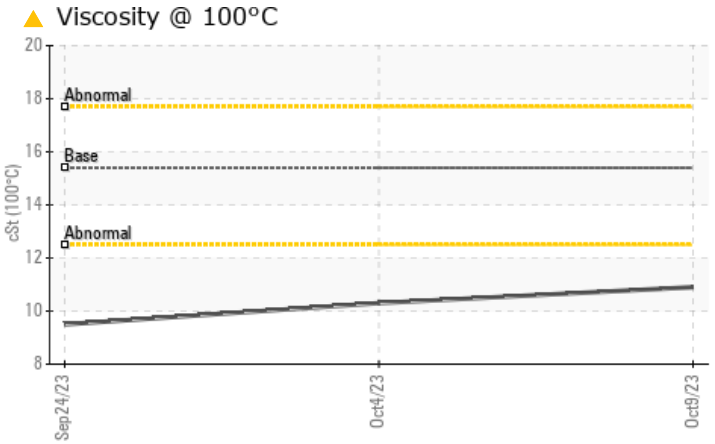
Sample Rating Trend



DIRT

COMPONENT CONDITION SUMMARY





RECOMMENDATION

No corrective action is recommended at this time.
Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL
Silicon	ppm	ASTM D5185m	>25	▲ **63**	▲ 77	▲ 83
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **10.9**	▲ 10.3	▲ 9.5

Customer Id: GFL821
Sample No.: GFL0090272
Lab Number: 05977574
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldridge +1
don.b505@comcast.net

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

04 Oct 2023 Diag: Jonathan Hester

DIRT

No corrective action is recommended at this time. Resample at the next service interval to monitor.Metal levels are typical for a new component breaking in. Elemental level of silicon (Si) above normal indicating ingress of seal material. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

view report

24 Sep 2023 Diag: Don Baldridge

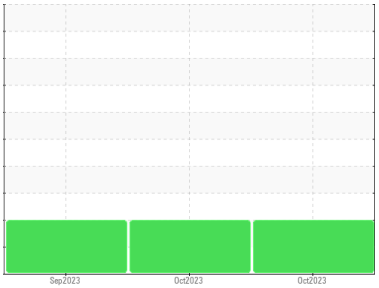
DIRT

Resample at the next service interval to monitor.Metal levels are typical for a new component breaking in. Fuel content negligible. Elemental level of silicon (Si) above normal indicating ingress of seal material. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

Machine Id
414047
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
Metal levels are typical for a new component breaking in.

Contamination
Elemental level of silicon (Si) above normal indicating ingress of seal material.

Fluid Condition
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0090272**	GFL0090211	GFL0090223
Sample Date		Client Info		**09 Oct 2023**	04 Oct 2023	24 Sep 2023
Machine Age	hrs	Client Info		**292**	266	146
Oil Age	hrs	Client Info		**150**	150	146
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	**20**	22	20
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>5	**<1**	0	0
Titanium	ppm	ASTM D5185m	>2	**<1**	0	0
Silver	ppm	ASTM D5185m	>2	**<1**	1	<1
Aluminum	ppm	ASTM D5185m	>20	**11**	12	11
Lead	ppm	ASTM D5185m	>40	**<1**	0	0
Copper	ppm	ASTM D5185m	>330	**79**	83	46
Tin	ppm	ASTM D5185m	>15	**2**	3	2
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**208**	276	335
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**101**	113	114
Manganese	ppm	ASTM D5185m	0	**2**	3	3
Magnesium	ppm	ASTM D5185m	1010	**768**	782	698
Calcium	ppm	ASTM D5185m	1070	**1271**	1376	1385
Phosphorus	ppm	ASTM D5185m	1150	**754**	772	660
Zinc	ppm	ASTM D5185m	1270	**927**	934	795
Sulfur	ppm	ASTM D5185m	2060	**2449**	2550	2328

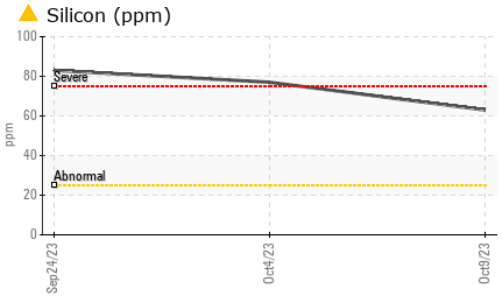
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	▲ **63**	▲ 77	▲ 83
Sodium	ppm	ASTM D5185m		**4**	6	4
Potassium	ppm	ASTM D5185m	>20	**25**	27	23
Fuel	%	ASTM D3524	>3.0	**<1.0**	<1.0	0.2

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	**0.2**	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**7.1**	7.3	6.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	**22.7**	23.7	25.6

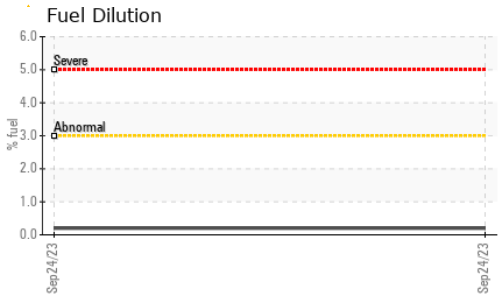
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**18.8**	19.7	20.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**8.4**	8.4	9.7

OIL ANALYSIS REPORT

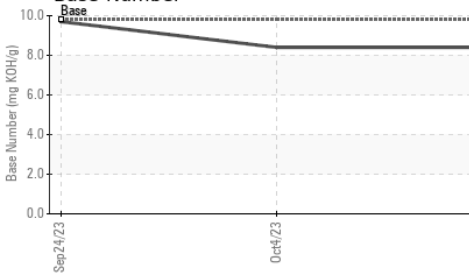
Silicon (ppm)



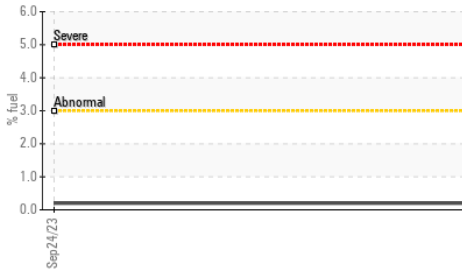
Fuel Dilution



Base Number



Fuel Dilution

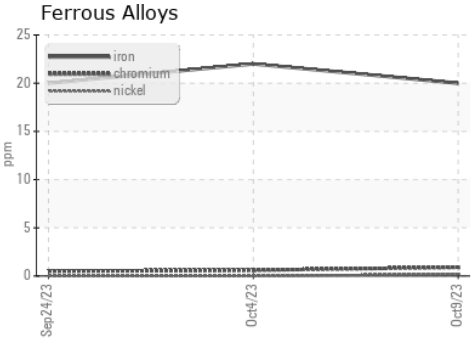


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

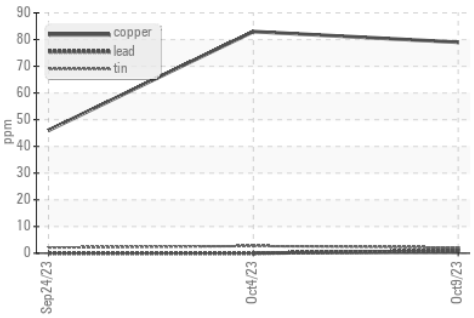
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **10.9**	▲ 10.3	▲ 9.5

GRAPHS

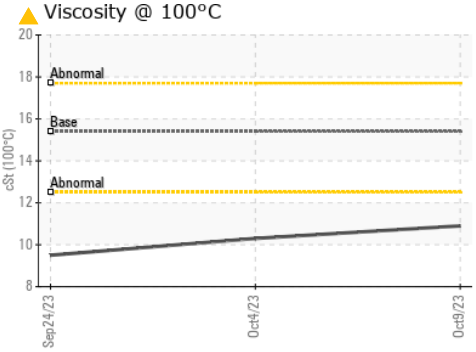
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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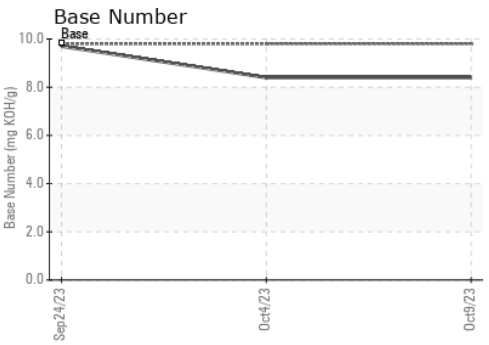

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0090272 **Received** : 12 Oct 2023
Lab Number : 05977574 **Diagnosed** : 16 Oct 2023
Unique Number : 10689524 **Diagnostician** : Don Baldridge
Test Package : FLEET (Additional Tests: FuelDilution)

To discuss this sample report, contact Customer Service at 1-800-237-1369.
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

GFL Environmental - 821 - Ozarks Hauling
33924 Olath Drive
Lebanon, MO
US 65536
Contact: Landen Johnson
landen.johnson@gflenv.com
T: (417)664-0010
F:

Report Id: GFL821 [WUSCAR] 05977574 (Generated: 10/18/2023 14:00:18) Rev: 1

Submitted By: GFL821, GFL824 and GFL829 - Landen Johnson